

Remarks

Reconsideration and withdrawal of the objections and rejections of the claims, in view of the amendments and remarks herein, is respectfully requested. Claims 1 and 8-9 are amended. The amendments are intended to advance the application and are not intended to concede to the correctness of the Examiner's position or to prejudice the prosecution of the claims prior to amendment, which claims are in a continuation of the present application. Claims 1-43 are pending.

The 35 U.S.C § 112 Rejections

The Examiner rejected claims 1, 8-9, 15-19, 23, and 25 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. This rejection, as it may be maintained with respect to the pending claims, is respectfully traversed.

Specifically, the Examiner asserts that the claims encompass currently unidentified portions of *vanA*-specific probes, and that the specification fails to disclose specific portions and to place any structural, chemical or functional limitations on the portions of those probes.

The Examiner is respectfully reminded that Applicant need not teach what is well known to the art. *vanA* sequences, including *vanA*-specific probes and primers, were well known to the art, as were amplification and hybridization assays to detect those sequences (see Petrich et al., Mol. Cell Probes, 13:275 (1999)) and U.S. Patent No. 6,274,316, both cited against the claims under 35 U.S.C § 102(b)).

Moreover, Applicant's specification clearly identifies the nucleotide sequence corresponding to nucleotides 870 to 896, 851 to 868 and 898 to 917 of *vanA* (see Figure 1 and SEQ ID NOs. 2-4). Further, the probe recited in claim 1 hybridizes to specific sequences in amplified *vanA* nucleic acid under high stringency hybridization conditions. Accordingly, the recited portions of *vanA*-specific probes have a common structure and function.

Therefore, withdrawal of the 35 U.S.C. § 112, first paragraph, "written description" rejection, is respectfully requested.

The Examiner also rejected claims 1, 8-9, 15-19, 23, and 25 under 35 U.S.C. § 112, second paragraph, asserting that the claims are indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. In particular, the

Examiner asserts that the claims 1) do not include a step correlating the detection of *vanA* in a sample with detection of hybrid formation and 2) do not recite a reference sequence upon which the nucleotide fragments are based. These rejections, as they may be maintained with respect to the pending claims, are respectfully traversed.

The amendment to claim 1 obviates the first basis for the rejection under § 112(2).

With regard to the second basis for the rejection under § 112(2), it is Applicant's position that the metes and bounds of "SEQ ID NO:2", "SEQ ID NO:3" and "SEQ ID NO:4" in claim 1, in view of the application as filed, which includes the SEQUENCE LISTING and Figure 1, would be clear to one of skill in the art.

Therefore, withdrawal of the 35 U.S.C. § 112, second paragraph, rejections is respectfully requested.

The 35 U.S.C. § 102(b) Rejections

The Examiner rejected claims 1, 8-9, 15-18, 23, and 25 under 35 U.S.C. § 102(b) as being anticipated by Petrich et al. (Mol. Cell Probes, 13:275 (1999)). The Examiner also rejected claims 1, 8-9, 15-19, 23, and 25-26 under 35 U.S.C. § 102(b) as being anticipated by Modrusan (U.S. Patent No. 6,274,316). The Examiner further rejected claims 1, 8-9, 15, and 25 under 35 U.S.C. § 102(b) as being anticipated by Arthur et al. (U.S. Patent No. 5,871,910). In addition, the Examiner rejected claims 1, 8-9, 15, 17-19, 23, and 25 under 35 U.S.C. § 102(b) as being anticipated by Bergeron et al. (U.S. Patent No. 5,994,066). These rejections are respectfully traversed.

Petrich et al. disclose 3 *vanA* specific sequences: primer *vanA1*, which has sequences corresponding to nucleotides 738-757 in the *vanA* sequence in NCBI Accession No. X56895, primer *vanA2*, which has sequences corresponding to nucleotides 1285-1367 in the *vanA* sequence in NCBI Accession No. X56895, and probe *vanA3*, which has sequences corresponding to nucleotides 941 to 957 in the *vanA* sequence in NCBI Accession No. X56895.

Petrich et al. do not disclose a *vanA*-specific probe that hybridizes under high stringency conditions and includes sequences substantially corresponding to SEQ ID NO:3, the complement thereof, or a portion thereof.

Modrusan disclose 7 *vanA* specific sequences: vanA811L-27 (column 12, lines 5-7) and vanA811L-27T (column 12, lines 8-10), each of which has sequences corresponding to nucleotides 811 to 837 of X56895; vanA813L-25 and vanA812L-25 (column 12, lines 37-42), each of which has sequences corresponding to nucleotides 813 to 837 of X56895; vanA1117-21 and vanA1121-17 (column 12, lines 43-44), each of which has sequences corresponding to nucleotides 1117 to 1137 of X56895; and vanA1005-22 (column 13, lines 26-27), which has sequences corresponding to nucleotides 1005 to 1026 of X56895.

Modrusan do not teach a *vanA*-specific probe that includes sequences substantially corresponding SEQ ID NO:3, the complement thereof, or a portion thereof.

Arthur et al. disclose probes to detect genes associated with antibiotic resistance genes, including the *vanA* gene.

The Examiner asserts that SEQ ID NOS:15, 16, 17 and 3 in Arthur et al. have the claimed nucleotides. SEQ ID NO:15 in Arthur et al. corresponds to a 7,225 nucleotide sequence encoding 5 proteins (column 24, lines 16-18); SEQ ID NO:16 in Arthur et al. corresponds to a 10,851 nucleotide sequence encoding a transposase (column 11, lines 56-60); SEQ ID NO:17 in Arthur et al. corresponds to a 2,667 nucleotide sequence encoding 3 resistance proteins (column 24, lines 18-21); and SEQ ID NO:3 in Arthur et al. corresponds to *vanA* sequences. SEQ ID NO:15 has a sequence encoding 5 proteins (column 24, lines 16-18). SEQ ID NO:16 includes a transposase sequence (column 11, lines 56-60), and SEQ ID NO:17 has sequences for 3 resistance proteins (column 24, lines 18-21).

Species-specific and universal DNA probes and primers are disclosed in Bergeron et al. The Examiner alleges that SEQ ID NO:170 in Bergeron et al. has the instantly claimed sequences. SEQ ID NO:170 in Bergeron et al. is a 2,607 nucleotide sequence having *vanH*, *vanA*, and *vanX* sequences (Table 9).

Specific and ubiquitous probes are disclosed in Annex I, and specific and ubiquitous primers are disclosed in Annex II, of Bergeron et al. Annex I does not disclose any sequences originating from SEQ ID NO:170. Annex II discloses 4 primers (SEQ ID NOS:225-228) based on sequences in *vanH*, *vanA* and *vanX*.

None of Petrich et al., Modrusan et al., Arthur et al. and Bergeron et al. disclose a *vanA*-specific probe that includes sequences substantially corresponding to SEQ ID NO:3, the complement thereof, or a portion thereof.

Accordingly, withdrawal of the 35 U.S.C. § 102(b) rejections is appropriate and respectfully requested.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 373-6959 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

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This paper or fee is being filed on the date indicated above using the USPTO's electronic filing system EFS-Web, and is addressed to: The Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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